WEST Search History

DATE: Monday, September 15, 2003

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,PGPB; PLUR=YES; OP=ADJ			
L7	L6 and ligand-gated	18	L7
L6	L4 and ion channel	160	L6
L5	L4 and alkaline gut	2	L5
L4	L3 and (methionine or leucine)	1960	L4
L3	l2 and amino acid	5795	L3
L2	(pest or pesticide)	30846	L2
L1	caatch1	2	L1

END OF SEARCH HISTORY

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NEWS 2		"Ask CAS" for self-help around the clock
NEWS 3	Feb 24	PCTGEN now available on STN
NEWS 4	Feb 24	TEMA now available on STN
NEWS 5	Feb 26	NTIS now allows simultaneous left and right truncation
NEWS 6	Feb 26	PCTFULL now contains images
NEWS 7	Mar 04	SDI PACKAGE for monthly delivery of multifile SDI results
NEWS 8	Mar 24	PATDPAFULL now available on STN
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NEWS 10	Apr 11	Display formats in DGENE enhanced
NEWS 11	Apr 14	MEDLINE Reload
NEWS 12	Apr 17	Polymer searching in REGISTRY enhanced
NEWS 13	SEP 09	CA/CAplus records now contain indexing from 1907 to the present
NEWS 14	Apr 21	New current-awareness alert (SDI) frequency in WPIDS/WPINDEX/WPIX
NEWS 15	Apr 28	RDISCLOSURE now available on STN
NEWS 16	May 05	Pharmacokinetic information and systematic chemical names added to PHAR
NEWS 17	May 15	MEDLINE file segment of TOXCENTER reloaded
NEWS 18	May 15	Supporter information for ENCOMPPAT and ENCOMPLIT updated
NEWS 19	May 19	Simultaneous left and right truncation added to WSCA
NEWS 20	May 19	RAPRA enhanced with new search field, simultaneous left and right truncation
NEWS 21	Jun 06	Simultaneous left and right truncation added to CBNB
NEWS 22	Jun 06	PASCAL enhanced with additional data
NEWS 23	Jun 20	2003 edition of the FSTA Thesaurus is now available
NEWS 24	Jun 25	HSDB has been reloaded
NEWS 25	Jul 16	Data from 1960-1976 added to RDISCLOSURE
NEWS 26	Jul 21	Identification of STN records implemented
NEWS 27	Jul 21	Polymer class term count added to REGISTRY
NEWS 28	Jul 22	INPADOC: Basic index (/BI) enhanced; Simultaneous Left and Right Truncation available
NEWS 29	AUG 05	New pricing for EUROPATFULL and PCTFULL effective August 1, 2003
NEWS 30	AUG 13	Field Availability (/FA) field enhanced in BEILSTEIN
NEWS 31	AUG 15	PATDPAFULL: one FREE connect hour, per account, in September 2003
NEWS 32	AUG 15	PCTGEN: one FREE connect hour, per account, in September 2003
NEWS 33	AUG 15	RDISCLOSURE: one FREE connect hour, per account, in September 2003
NEWS 34	AUG 15	TEMA: one FREE connect hour, per account, in September 2003
NEWS 35	AUG 18	Data available for download as a PDF in RDISCLOSURE
NEWS 36	AUG 18	Simultaneous left and right truncation added to PASCAL
NEWS 37	AUG 18	FROSTI and KOSMET enhanced with Simultaneous Left and Right

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                  Truncation
 NEWS 38  AUG 18  Simultaneous left and right truncation added to ANABSTR

 NEWS EXPRESS  April 4 CURRENT WINDOWS VERSION IS V6.01a, CURRENT
               MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),
               AND CURRENT DISCOVER FILE IS DATED 01 APRIL 2003
 NEWS HOURS    STN Operating Hours Plus Help Desk Availability
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FILE 'HOME' ENTERED AT 15:23:43 ON 15 SEP 2003

=> file agricola caplus biosis
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       0.21       0.21

FILE 'AGRICOLA' ENTERED AT 15:23:50 ON 15 SEP 2003

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FILE 'BIOSIS' ENTERED AT 15:23:50 ON 15 SEP 2003
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=> s (pest or pesticide) and (amino acid or methionine or leucine)
   2 FILES SEARCHED...
L1        2418 (PEST OR PESTICIDE) AND (AMINO ACID OR METHIONINE OR LEUCINE)

=> s l1 and (caatch1 or cation amino acid transporter channel)
L2           2 L1 AND (CAATCH1 OR CATION AMINO ACID TRANSPORTER CHANNEL)

=> dup rem l2
PROCESSING COMPLETED FOR L2
L3           2 DUP REM L2 (0 DUPLICATES REMOVED)

=> d 1-2 ti

L3   ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Pesticidal compounds disrupting the function of CAATCH1 (
     cation-amino acid transporter/
     channel 1) protein

L3   ANSWER 2 OF 2  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   The CAATCH1 (cation-amino acid
     transporter/channel 1) transport protein as a target for
     pesticides derived from amino acids
```

=> d 1-2 ab

L3 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN
AB Pesticidal compns. contain one or more compds. that interact with org. solute transporter/ligand-gated ion channel multifunction polypeptides, such as the **CAATCH1** protein, in the **pest**. Upon exposure to a target **pest**, these compns. either compromise **pest** growth and/or cause the death of the **pest**. In a preferred embodiment, the compns. of the invention contain one or more amino acids and/or **amino acid** analogs. In a particularly preferred embodiment, a pesticidal compn. of the invention comprises **methionine** or **leucine**, or an analog thereof.

L3 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN
AB A novel target for **pesticide** action and **pest** control is presented. The target is the **cation-amino acid transporter/channel** 1 (**CAATCH1**) of Manduca sexta and homologs. Compds. that interact with the protein can alter patterns of **amino acid** metab. and alter ion homeostasis leading to either the compromise **pest** growth or death of the **pest**. In a preferred embodiment, the compns. of the subject invention contain one or more amino acids and/or **amino acid** analogs. In a particularly preferred embodiment, the methods of the subject invention involve exposing a **pest** to a compn. that comprises **methionine** or **leucine**, or an analog thereof. Feeding expts. with a feed contg. 10 wt. % **methionine** showed that L-**methionine** is toxic to Manduca sexta larvae. Eggplant leaves sprayed with aq. solns. of **methionine** were also toxic to M. sexta and Leptinotarsa decemlineata. Plants with increased levels of **methionine** or other amino acids may therefore have an increased resistance to pests with CAATCH proteins.

=> d pi

L3 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003154508	A1	20030814	US 2001-991458	20011116
	US 2003140371	A1	20030724	US 2002-298974	20021118

=> d 2 pi

L3 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003140371	A1	20030724	US 2002-298974	20021118
	US 2003154508	A1	20030814	US 2001-991458	20011116

=> s l1 and sexta
L4 38 L1 AND SEXTA

=> dup rem l4
PROCESSING COMPLETED FOR L4
L5 36 DUP REM L4 (2 DUPLICATES REMOVED)

=> d 1-10 ti

L5 ANSWER 1 OF 36 CAPLUS COPYRIGHT 2003 ACS on STN
TI Pesticidal compounds disrupting the function of CAATCH1 (cation-**amino acid** transporter/channel 1) protein

L5 ANSWER 2 OF 36 CAPLUS COPYRIGHT 2003 ACS on STN
TI The CAATCH1 (cation-**amino acid** transporter/channel 1) transport protein as a target for pesticides derived from amino acids

L5 ANSWER 3 OF 36 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
TI Molecular interactions between the specialist herbivore Manduca **sexta** (Lepidoptera, Sphingidae) and its natural host Nicotiana attenuata. VI. Microarray analysis reveals that most herbivore-specific transcriptional changes are mediated by fatty acid-**amino acid** conjugates.

L5 ANSWER 4 OF 36 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
TI Differential activity and degradation of plant volatile elicitors in regurgitant of tobacco hornworm (Manduca **sexta**) larvae.

L5 ANSWER 5 OF 36 CAPLUS COPYRIGHT 2003 ACS on STN
TI A secreted protein of teratocytes inhibiting growth of Lepidopteran larvae with possible use in **pest** control

L5 ANSWER 6 OF 36 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
TI Role of helix 3 in pore formation by the Bacillus thuringiensis insecticidal toxin Cry1Aa.

L5 ANSWER 7 OF 36 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
TI Denaturation of either Manduca **sexta** aminopeptidase N or Bacillus thuringiensis Cry1A toxins exposes binding epitopes hidden under nondenaturing conditions.

L5 ANSWER 8 OF 36 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
TI Cry1A toxins of Bacillus thuringiensis bind specifically to a region adjacent to the membrane-proximal extracellular domain of BT-R1 in Manduca **sexta**: involvement of a cadherin in the entomopathogenicity of Bacillus thuringiensis.

L5 ANSWER 9 OF 36 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
TI Cloning, partial purification and in vivo developmental profile of expression of the juvenile hormone epoxide hydrolase of Ctenocephalides felis.

L5 ANSWER 10 OF 36 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
TI Molecular cloning, characterisation, and expression of a neutral trehalase from the insect pathogenic fungus Metarhizium anisopliae.

=> d 3 ab

L5 ANSWER 3 OF 36 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AB Evidence is accumulating that insect-specific plant responses are mediated by constituents in the oral secretions and regurgitants (R) of herbivores, however the relative importance of the different potentially active constituents remains unclear. Fatty acid-**amino acid** conjugates (FACs) are found in the R of many insect herbivores and have been shown to be necessary and sufficient to elicit a set of herbivore-specific responses when the native tobacco plant Nicotiana attenuata is attacked by the tobacco hornworm, Manduca **sexta**. Attack by this specialist herbivore results in a large transcriptional reorganization in N. attenuata, and 161 genes have been cloned from previous cDNA differential display-polymerase chain reaction and subtractive hybridization with magnetic beads analysis. cDNAs of these genes, in addition to those of 73 new R-responsive genes identified by cDNA-amplified fragment-length polymorphism display of R-elicited plants, were spotted on polyepoxide coated glass slides to create microarrays highly enriched in Manduca spp.- and R-induced genes. With these microarrays, we compare transcriptional responses in N. attenuata treated

with R from the two most damaging lepidopteran herbivores of this plant in nature, M. **sexta** and Manduca quinquemaculata, which have very similar FAC compositions in their R, and with the two most abundant FACs in Manduca spp. R. More than 68% of the genes up- and down-regulated by M. **sexta** R were similarly regulated by M. quinquemaculata R. A majority of genes up-regulated (64%) and down-regulated (49%) by M. **sexta** R were similarly regulated by treatment with the two FACs. In contrast, few genes showed similar transcriptional changes after H2O2- and R-treatment. These results demonstrate that the two most abundant FACs in Manduca spp. R can account for the majority of Manduca spp.-induced alterations of the wound response of N. attenuata.

=> d 11-20 ti

L5 ANSWER 11 OF 36 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
TI Alkaloid tolerance in Manduca **sexta** and phylogenetically related sphingids (Lepidoptera: Sphingidae.

L5 ANSWER 12 OF 36 CAPLUS COPYRIGHT 2003 ACS on STN
TI Insecticidal toxins from spider venoms for use as insecticides and expression constructs for secretory manufacture

L5 ANSWER 13 OF 36 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
TI The alpha-helix 4 residue, Asn135, is involved in the oligomerization of Cry1Ac1 and Cry1Ab5 Bacillus thuringiensis toxins.

L5 ANSWER 14 OF 36 CAPLUS COPYRIGHT 2003 ACS on STN
TI Use of vacuole targeting peptides to direct plant-toxic proteins to plant vacuoles and to create **pest**-resistant transgenic plants

L5 ANSWER 15 OF 36 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
TI Ferritin acts as the most abundant binding protein for snowdrop lectin in the midgut of rice brown planthoppers (Nilaparvata lugens.

L5 ANSWER 16 OF 36 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
TI Characterization of a Bacillus thuringiensis delta-endotoxin which is toxic to insects in three orders.

L5 ANSWER 17 OF 36 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
TI Homology modeling of the insect chitinase catalytic domain-oligosaccharide complex and the role of a putative active site tryptophan in catalysis.

L5 ANSWER 18 OF 36 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
TI cDNA and deduced **amino acid** sequence of apolipophorin-III from Agrius convolvuli (Sphingidae: Lepidoptera.

L5 ANSWER 19 OF 36 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
TI cDNA sequence, mRNA expression and genomic DNA of trypsinogen from the Indianmeal moth, Plodia interpunctella.

L5 ANSWER 20 OF 36 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
TI Effects of Manduca diuresin on neonates of the tobacco hornworm, Manduca **sexta**.

=> d 21-30 ti

L5 ANSWER 21 OF 36 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
TI Identification of residues in domain III of Bacillus thuringiensis Cry1Ac toxin that affect binding and toxicity.

L5 ANSWER 22 OF 36 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
TI Identification of Bacillus thuringiensis delta-endotoxin Cry1C domain III

amino acid residues involved in insect specificity.

L5 ANSWER 23 OF 36 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2003) on STN DUPLICATE 1
TI Molecular cloning and heterologous expression of a glutathione S-transferase involved in insecticide resistance from the diamondback moth, Plutella xylostella.

L5 ANSWER 24 OF 36 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
TI The ultraspiracle gene of the spruce budworm, Choristoneura fumiferana: Cloning of cDNA and developmental expression of mRNA.

L5 ANSWER 25 OF 36 CAPLUS COPYRIGHT 2003 ACS on STN
TI A chitinase of Manduca **sexta** and a cDNA encoding it and their use in the preparation of insect resistant plants

L5 ANSWER 26 OF 36 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
TI cDNAs for a chymotrypsinogen-like protein from two strains of Plodia interpunctella.

L5 ANSWER 27 OF 36 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2003) on STN
TI Insect chitinases: molecular biology and potential use as biopesticides.

L5 ANSWER 28 OF 36 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
TI Insecticyanin of Agrius convolvuli: Purification and characterization of the biliverdin-binding protein from the larval hemolymph.

L5 ANSWER 29 OF 36 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
TI The Bacillus thuringiensis insecticidal toxin binds biotin-containing proteins.

L5 ANSWER 30 OF 36 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
TI Characterization of a 46 kDa insect chitinase from transgenic tobacco.

=> d 31-36 ti

L5 ANSWER 31 OF 36 CAPLUS COPYRIGHT 2003 ACS on STN
TI A serine proteinase inhibitor from Manduca **sexta** and cloning and expression of a cDNA encoding it in transgenic plants

L5 ANSWER 32 OF 36 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
TI Molecular Cloning of an Insect Aminopeptidase N That Serves as a Receptor for Bacillus thuringiensis CryIA(c) Toxin.

L5 ANSWER 33 OF 36 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
TI Cloning and expression of a receptor for an insecticidal toxin of Bacillus thuringiensis.

L5 ANSWER 34 OF 36 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
TI Isolation and sequencing of insecticidal peptides from the primitive hunting spider, Plectreurys tristis (Simon.

L5 ANSWER 35 OF 36 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2003) on STN
TI Insect neuropeptides: current status and avenues for **pest** control.

L5 ANSWER 36 OF 36 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
TI IDENTIFICATION OF A LOCUST DIURETIC HORMONE.

=> d 35 ab

L5 ANSWER 35 OF 36 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2003) on STN
AB The physiological processes regulated by insect neuropeptides are extensive and include growth, development, molting, reproduction, diapause, behavior, color change, ion and water balance, and muscle contraction. Nearly 80 novel insect neuropeptides have been sequenced to date, 10 or so gene sequences have been determined, numerous analogs have been synthesized, and neuropeptide genes have been expressed in vector systems. Investigations into sites of synthesis and release, and tissue specificity and action, continue to reveal complexity in the (classically simple) insect neuroendocrine system. The rapidly increasing knowledge in this area suggests that useful prototypes for the design of selective **pest** control agents will emerge in the forseeable future.

=> d 35 so

L5 ANSWER 35 OF 36 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2003) on STN
SO ACS symposium series, 1994. No. 551. p. 292-318
Publisher: Washington, D.C. : American Chemical Society, 1974-
CODEN: ACSMC8; ISSN: 0097-6156

=> s cation amino acid transporter channel
L6 8 CATION AMINO ACID TRANSPORTER CHANNEL

=> dup rem l6
PROCESSING COMPLETED FOR L6
L7 5 DUP REM L6 (3 DUPLICATES REMOVED)

=> d 1-5 ti

L7 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
TI Pesticidal compounds disrupting the function of CAATCH1 (**cation-amino acid transporter/channel** 1) protein

L7 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
TI The CAATCH1 (**cation-amino acid transporter/channel** 1) transport protein as a target for pesticides derived from amino acids

L7 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 1
TI K+ amino acid transporter KAAT1 mutant Y147F has increased transport activity and altered substrate selectivity

L7 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 2
TI Conserved tyrosine-147 plays a critical role in the ligand-gated current of the epithelial **cation/amino acid transporter/channel** CAATCH1

L7 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 3

TI Amino acid transporter CAATCH1 is also an amino acid-gated cation channel

=> d 4-5 ab

L7 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 2
AB CAATCH1 functions both as an amino-acid-gated cation channel and as a cation-dependent, proline-preferring, nutrient amino acid transporter in which the 2 functions are thermodynamically uncoupled. This study focuses on the ionic channel aspect, in which a Tyr147 (wild type) to Phe147 (Y147F) site-directed mutation was investigated by steady-state electrophysiol. measurements in the Xenopus laevis oocyte expression system. This tyrosine residue is conserved within the 3rd transmembrane domain in members of the Na+:neurotransmitter transporter family (SNF), where it plays a role in binding pharmacol. ligands such as cocaine to the serotonin (SERT), dopamine (DAT), and norepinephrine (NET) transporters. Epithelial CAATCH1 is a member of the SNF family. The results show that amino acid ligand-gating selectivity and current magnitudes in Na+- and K+-contg. media are differentially altered in CAATCH1 Y147F compared with the wild type. In the absence of amino acid ligands, the channel conductance of Na+, K+, and Li+ that is obsd. in the wild type was reduced to virtually zero in Y147F. In the wild type, proline binding increased conductance strongly in Na+-contg. medium and moderately in K+-contg. medium, whereas in Y147F proline failed to elicit any cation currents beyond those of N-methyl-D-glucamine- or water-injected oocytes. In the wild type, methionine binding strongly inhibited inward Na+ currents, whereas in Y147F it strongly stimulated inward currents in both Na+- and K+-contg. media. Indeed, in Na+-contg. medium, the relative potency ranking for inward current inhibition in the wild type (Met > Leu > Gly > Phe > Thr) was similar to the ranking of ligand-permissive gating of large inward currents in Y147F. In Na+-contg. medium, current/voltage relationships elicited by ligands in the wild type were complex and reversing, whereas in Y147F they were linear and inwardly rectifying. In K+-contg. medium, current/voltage relationships remained non-linear in Y147F. Both wild-type and Y147F currents were Cl- independent. Together, these data demonstrate a crit. role for Tyr147 in ligand-binding selectivity and modulation of the ionic channel conductance in CAATCH1. The results support the argument that inhibition of the CAATCH1 conductance by free methionine shares some properties in common with ligand inhibition of DAT, SERT, NET and the GABA transporter (GAT1).

L7 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 3
AB CAATCH1 (**cation-amino acid transporter/channel**) is a recently cloned insect epithelial membrane protein related to mammalian Na+-, Cl--coupled neurotransmitter transporters. In the present study we analyze the relationship between CAATCH1-mediated amino acid transport and ion fluxes by utilizing the Xenopus oocyte expression system in conjunction with electrophysiol. and radiotracer uptake. Simultaneous flux measurements reveal that elec. currents and amino acid transport are thermodynamically uncoupled. This observation is supported by measuring significant uptake even in the absence of external alkali cations. Remarkably, CAATCH1-assocd. Na+ or K+ currents are large and do not sat. with voltage nor with cation concn. These currents reverse in Nernstian fashion, thereby conferring channel activity in CAATCH1. Upon step-changes in the membrane potential, CAATCH1-expressing oocytes exhibit transient currents. Detailed analyses of these transients in the absence and presence of amino acids reveal direct ligand-protein interaction, demonstrating that binding by different amino acids (e.g. proline, threonine, methionine) differentially affects the state probability of CAATCH1 but has no effect on the maximal charge movement (Qmax). Together these data suggest that CAATCH1 is a multifunction membrane protein that mediates thermodynamically uncoupled amino acid uptake but functions predominantly as an amino acid-gated alkali cation channel.

```
=> s ((stevens b?) or (stevens, b?))/au
L8          859 ((STEVENS B?) OR (STEVENS, B?))/AU

=> s l8 and pest
L9            5 L8 AND PEST

=> dup rem l9
PROCESSING COMPLETED FOR L9
L10           5 DUP REM L9 (0 DUPLICATES REMOVED)

=> d 1-5 ti

L10  ANSWER 1 OF 5  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Pesticidal compounds disrupting the function of CAATCH1 (cation-amino acid
     transporter/channel 1) protein

L10  ANSWER 2 OF 5  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   The CAATCH1 (cation-amino acid transporter/channel 1) transport protein as
     a target for pesticides derived from amino acids

L10  ANSWER 3 OF 5  BIOSIS  COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
TI   Pesticide compositions.

L10  ANSWER 4 OF 5  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Pesticidal compositions with slow crystallization kinetics

L10  ANSWER 5 OF 5  BIOSIS  COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
TI   Attraction to squalene by ticks (Acari: Ixodidae): First demonstration of
     a host-derived attractant.


=> d 3 ab

L10  ANSWER 3 OF 5  BIOSIS  COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AB   The present invention relates to pesticide compositions in which at least
     one of the components of the composition is a polymeric material which
     reduces the rate of crystallization of the pesticide active ingredient in
     the composition. This invention also provides a method for reducing the
     rate of crystallization of pesticide active ingredients and a method for
     controlling pests comprising applying to the pest the
     polymer-containing composition.


=> s l8 and caatch1
L11          12 L8 AND CAATCH1

=> dup rem l11
PROCESSING COMPLETED FOR L11
L12           8 DUP REM L11 (4 DUPLICATES REMOVED)

=> d 1-8 ti

L12  ANSWER 1 OF 8  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Pesticidal compounds disrupting the function of CAATCH1
     (cation-amino acid transporter/channel 1) protein

L12  ANSWER 2 OF 8  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   The CAATCH1 (cation-amino acid transporter/channel 1) transport
     protein as a target for pesticides derived from amino acids

L12  ANSWER 3 OF 8  CAPLUS  COPYRIGHT 2003 ACS on STN  DUPLICATE 1
TI   K+ amino acid transporter KAAT1 mutant Y147F has increased transport
```

activity and altered substrate selectivity

L12 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 2
TI Conserved tyrosine-147 plays a critical role in the ligand-gated current of the epithelial cation/amino acid transporter/channel **CAATCH1**

L12 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 3
TI Amino acid transporter **CAATCH1** is also an amino acid-gated cation channel

L12 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 4
TI A novel electrogenic amino acid transporter is activated by K+ or Na+, is alkaline pH-dependent, and is Cl--independent

L12 ANSWER 7 OF 8 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
TI A new Na+ and K+ activated nutrient cotransporter with inward leakage currents modulated by amino acid substrates: **CAATCH1**.

L12 ANSWER 8 OF 8 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
TI Specific site-directed mutation alters carrier/gated ion leak channel properties of **CAATCH1**.

=> d 5 ab

L12 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 3
AB **CAATCH1** (cation-amino acid transporter/channel) is a recently cloned insect epithelial membrane protein related to mammalian Na+-, Cl--coupled neurotransmitter transporters. In the present study we analyze the relationship between **CAATCH1**-mediated amino acid transport and ion fluxes by utilizing the Xenopus oocyte expression system in conjunction with electrophysiol. and radiotracer uptake. Simultaneous flux measurements reveal that elec. currents and amino acid transport are thermodynamically uncoupled. This observation is supported by measuring significant uptake even in the absence of external alkali cations. Remarkably, **CAATCH1**-assocd. Na+ or K+ currents are large and do not sat. with voltage nor with cation concn. These currents reverse in Nernstian fashion, thereby conferring channel activity in **CAATCH1** . Upon step-changes in the membrane potential, **CAATCH1** -expressing oocytes exhibit transient currents. Detailed analyses of these transients in the absence and presence of amino acids reveal direct ligand-protein interaction, demonstrating that binding by different amino acids (e.g. proline, threonine, methionine) differentially affects the state probability of **CAATCH1** but has no effect on the maximal charge movement (Qmax). Together these data suggest that **CAATCH1** is a multifunction membrane protein that mediates thermodynamically uncoupled amino acid uptake but functions predominantly as an amino acid-gated alkali cation channel.

=> s ((cuda j?) or (cuda, j?))/au
L13 66 ((CUDA J?) OR (CUDA, J?))/AU

=> s l13 and (pest or pesticide)
L14 17 L13 AND (PEST OR PESTICIDE)

=> dup rem l14
PROCESSING COMPLETED FOR L14
L15 16 DUP REM L14 (1 DUPLICATE REMOVED)

=> d 1-10 ti

L15 ANSWER 1 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN
TI Pesticidal compounds disrupting the function of CAATCH1 (cation-amino acid

transporter/channel 1) protein

L15 ANSWER 2 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN
TI The CAATCH1 (cation-amino acid transporter/channel 1) transport protein as a target for pesticides derived from amino acids

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TI Biology and laboratory rearing of Cricotopus lebetis (Diptera: Chironomidae), a natural enemy of the aquatic weed hydrilla (Hydrocharitaceae.

L15 ANSWER 5 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 1
TI Gratiana boliviana, a potential biocontrol agent of Solanum viarum: Quarantine host-specificity testing in Florida and field surveys in South America

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TI Redescription of Cricotopus lebetis (Diptera: Chironomidae), a potential biocontrol agent of the aquatic weed hydrilla (Hydrocharitaceae.

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TI Host specificity of the Argentine root-boring weevil, Heilipodus ventralis (Coleoptera: Curculionidae), a potential biocontrol agent for snakeweeds (Gutierrezia: Asteraceae) in western North American rangelands-U.S. quarantine tests.

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TI BVA 2 mosquito larvicide: A new surface oil larvicide for mosquito control.

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TI Evaluation of Ditylenchus phyllobius (Tylenchida: Anguinidae) as a potential biological control agent for Solanum viarum and Solanum tampicense (Solanaceae.

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TI Integrated control of Hydrilla verticillata with fungal and insect biocontrol agents.

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TI Evaluation of Lagenidium giganteum for biocontrol of Mansonia mosquitoes in Florida (Diptera: Culicidae.

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TI Trophic interactions between Mozena, mesquite and a microbe: Implications for host-specificity testing of insects of leguminous weeds.

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TI Host range of the mesquite cutworm, Melipotis indomita (Lepidoptera: Noctuidae), a potential biocontrol agent for mesquite (Prosopis spp.

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TI TRICHOBARIS-BRIDWELLI A NEW HOST FOR BRACON-MELLITOR.

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FILE 'AGRICOLA, CAPLUS, BIOSIS' ENTERED AT 15:23:50 ON 15 SEP 2003
L1 2418 S (PEST OR PESTICIDE) AND (AMINO ACID OR METHIONINE OR LEUCINE)
L2 2 S L1 AND (CAATCH1 OR CATION AMINO ACID TRANSPORTER CHANNEL)
L3 2 DUP REM L2 (0 DUPLICATES REMOVED)
L4 38 S L1 AND SEXTA
L5 36 DUP REM L4 (2 DUPLICATES REMOVED)
L6 8 S CATION AMINO ACID TRANSPORTER CHANNEL
L7 5 DUP REM L6 (3 DUPLICATES REMOVED)
L8 859 S ((STEVENS B?) OR (STEVENS, B?))/AU
L9 5 S L8 AND PEST
L10 5 DUP REM L9 (0 DUPLICATES REMOVED)
L11 12 S L8 AND CAATCH1
L12 8 DUP REM L11 (4 DUPLICATES REMOVED)
L13 66 S ((CUDA J?) OR (CUDA, J?))/AU
L14 17 S L13 AND (PEST OR PESTICIDE)
L15 16 DUP REM L14 (1 DUPLICATE REMOVED)